

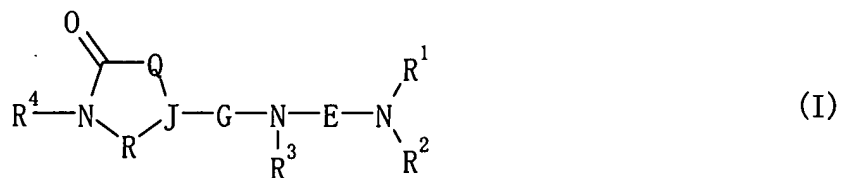
In the Claims

Please cancel claims 3, 17-21 and 30 without prejudice to the filing of future continuing applications.

Please substitute the following claims 1, 2, 4, 6, 16, 22, 25-29 and 31-39 for the claims 1, 2, 4, 6, 16, 22, 25-29 and 31-39 now pending in the above-identified application.

Please add new claims 40 and 41.

1. (Currently Amended) A compound of the formula:



wherein

~~R¹ is a hydrocarbon group;~~

~~R² is a hydrocarbon group having 2 or more carbon~~

~~atoms, or R¹ and R² may in combination form,~~

~~together with an adjacent nitrogen atom, a 1-piperidinyl, 1-homopiperidinyl, 1-~~

~~piperazinyl or 1-homopiperazinyl ring optionally having a substituent or substituents;~~

R³ is a hydrocarbon group optionally having a substituent

or substituents or a heterocyclic group optionally

having a substituent or substituents;

R⁴ is a hydrogen atom, a hydrocarbon group optionally

having a substituent or substituents or a heterocyclic

group optionally having a substituent or substituents;

E is a divalent chain hydrocarbon group optionally having

a substituent or substituents other than an oxo group;

G is CO or SO₂;

J is a nitrogen atom or a methine group optionally having

a substituent or substituents; and

Q and R are each a bond or a divalent chain C₁₋₃ hydrocarbon

group optionally having a substituent or substituents,
or a salt thereof.

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2. (Currently Amended) The compound of claim 1, wherein ~~**R¹ is a C₁₋₆ alkyl group or a C₃₋₈ cycloalkyl group; R² is a C₂₋₆ alkyl group or a C₃₋₈ cycloalkyl group, or R¹ and R² in combination form, together with an adjacent nitrogen atom, a ring optionally having a substituent or substituents;**~~ R³ is a C₁₋₆ alkyl group optionally having a substituent or substituents, a C₃₋₈ cycloalkyl group optionally having a substituent or substituents, an aryl group optionally having a substituent or substituents or a heterocyclic group optionally having a substituent or substituents; R⁴ is a hydrogen atom, alkyl group optionally having a substituent or substituents, a C₃₋₈ cycloalkyl group optionally having a substituent or substituents, an aryl group optionally having a substituent or substituents or a heterocyclic group optionally having a substituent or substituents; E is a C₂₋₅ alkylene group optionally having a substituent or substituents other than oxo group; G is CO or SO₂; J is a nitrogen atom or a methine group optionally having a substituent or substituents; and Q and R are each a bond or a C₁₋₃ alkylene group optionally having a substituent or substituents.

3. (Cancelled)

4. (Currently Amended) The compound of claim ~~3~~ **1**, wherein the ring optionally having a substituent or substituents **formed by R¹ and R²** is a 1-piperidinyl group or a 1-piperazinyl group each optionally having a substituent or substituents.

5. (Original) The compound of claim 4, wherein the substituent of the 1-piperidinyl group or 1-piperazinyl group is (1) phenyl-C₁₋₄ alkyl optionally having halogen on a benzene ring, (2) diphenylmethyl optionally having hydroxy, (3) benzoyl optionally having halogen on a benzene ring, (4) 2-phenylethen-1-yl, (5) phenyl optionally having halogen, (6) hydroxy, (7) phenoxy or (8) benzyloxy.

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6. (Currently Amended) The compound of claim 3 4, wherein the ring optionally having a substituent or substituents is a 1-piperidinyl group optionally having a substituent or substituents.

7. (Original) The compound of claim 6, wherein the substituent of the 1-piperidinyl group is a benzyl group optionally having halogen on a benzene ring.

8. (Original) The compound of claim 1, wherein R³ is (1) a C₁₋₆ alkyl group, (2) a C₃₋₈ cycloalkyl group, (3) a benzyl group optionally having a hydroxy group, (4) a naphthylmethyl group, (5) a phenyl group optionally having, as a substituent, (a) C₁₋₄ alkyl optionally having halogen, (b) C₁₋₄ alkoxy optionally having halogen, (c) phenyl, (d) cyano, (e) benzyloxy or (f) a halogen atom, (6) a naphthyl group, (7) an indanyl group or (8) a tetrahydronaphthyl group.

9. (Original) The compound of claim 1, wherein R³ is a phenyl group optionally having, as a substituent, C₁₋₄ alkyl or halogen.

10. (Original) The compound of claim 1, wherein E is C₂₋₆ polymethylene optionally having hydroxy.

11. (Original) The compound of claim 1, wherein R^4 is (1) a hydrogen atom, (2) C_{1-6} alkyl optionally having (a) halogen, (b) pyridyl, (c) morpholino, (d) furyl, (e) ethynyl or (f) C_{3-8} cycloalkyl, (3) phenyl- C_{1-4} alkyl optionally having (a) halogen, (b) C_{1-4} alkyl, (c) halogeno- C_{1-4} alkyl or (d) C_{1-4} alkoxy on a benzene ring, or (4) C_{3-8} cycloalkyl.

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12. (Original) The compound of claim 1, wherein R^4 is (a) C_{1-4} alkyl group optionally having, as a substituent, halogen or furyl or (b) a benzyl group optionally having halogen on a benzene ring.

13. (Original) The compound of claim 1, wherein $-N(R^1)R^2$ is a 1-piperidiny group optionally having a substituent or substituents, E is a trimethylene group, R^3 is a phenyl group optionally having a substituent or substituents, G is CO, J is CH, and Q and R are each a methylene group.

14. (Original) A compound selected from the group consisting of *N*-[3-(4-benzyl-1-piperidiny)propyl]-*N*-(3,4-dichlorophenyl)-1-methyl-5-oxo-3-pyrrolidinecarboxamide, 1-benzyl-*N*-[3-(4-benzyl-1-piperidiny)propyl]-5-oxo-*N*-phenyl-3-pyrrolidinecarboxamide, 1-(2-chlorobenzyl)-*N*-[3-(4-benzyl-1-piperidiny)propyl]-5-oxo-*N*-phenyl-3-pyrrolidinecarboxamide, *N*-[3-[4-(4-fluorobenzyl)-1-piperidiny]propyl]-*N*-(3,4-dichlorophenyl)-1-methyl-5-oxo-3-pyrrolidinecarboxamide and *N*-[3-(4-benzyl-1-piperidiny)propyl]-5-oxo-*N*-phenyl-1-(2,2,2-trifluoroethyl)-3-pyrrolidinecarboxamide, or a salt thereof.

15. (Original) A prodrug of the compound of claim 1.

16. (Currently Amended) A ~~pharmaceutical~~ composition ~~containing~~ comprising the compound of claim 1 or a prodrug thereof and a pharmaceutically acceptable carrier, excipient or diluent.

Claims 17-21 (Cancelled)

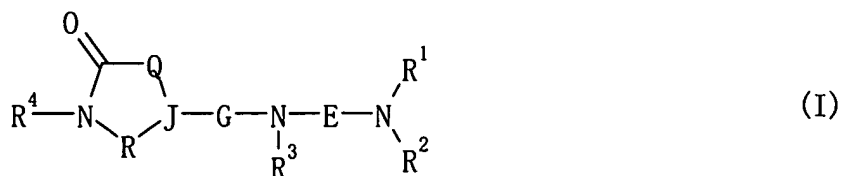
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22. (Currently Amended) The composition of claim ~~19~~ 16, ~~which~~ further comprising contains a protease inhibitor, ~~and/or~~ a reverse transcriptase inhibitor ~~in~~ or a combination thereof.

23. (Original) The composition of claim 22, wherein the reverse transcriptase inhibitor is zidovudine, didanosine, zalcitabine, lamivudine, stavudine, abacavir, nevirapine, delavirdine or efavirenz.

24. (Original) The composition of claim 22, wherein the protease inhibitor is saquinavir, ritonavir, indinavir, amprenavir or nelfinavir.

25. (Currently Amended) A method ~~Use of the compound of claim 1 or a prodrug thereof, and a protease inhibitor and/or a reverse transcriptase inhibitor~~ for the prophylaxis or treatment of HIV infectious diseases comprising administering to a subject in need thereof, a compound of claim 1 or a prodrug thereof, and a protease inhibitor and/or a reverse transcriptase inhibitor such that HIV infectious disease is prevented or treated.

26. (Currently Amended) A method for producing a compound of the formula:



wherein

~~R¹ is a hydrocarbon group;~~

~~R² is a hydrocarbon group having 2 or more carbon~~

~~atoms, or R¹ and R² may in combination form,~~

~~together with an adjacent nitrogen atom, a 1-piperidinyl, 1-homopiperidinyl, 1-~~

~~piperazinyl or 1-homopiperazinyl ring~~

~~optionally having a substituent or substituents;~~

R³ is a hydrocarbon group optionally having a substituent

or substituents or a heterocyclic group optionally

having a substituent or substituents;

R⁴ is a hydrogen atom, a hydrocarbon group optionally

having a substituent or substituents or a heterocyclic

group optionally having a substituent or substituents;

E is a divalent chain hydrocarbon group optionally having

a substituent or substituents other than an oxo group;

G is CO or SO₂;

J is a nitrogen atom or a methine group optionally having

a substituent or substituents; and

Q and R are each a bond or a divalent chain C₁₋₃ hydrocarbon

group optionally having a substituent or

substituents,

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or a salt thereof, which method comprises reacting a compound of the formula:

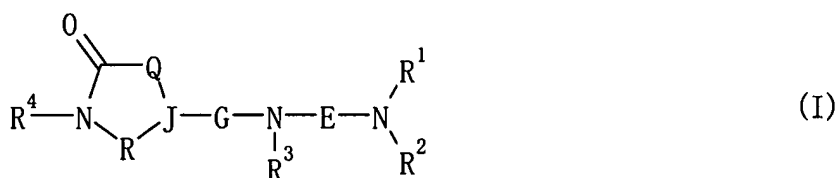


wherein each symbol is as defined above, or a salt thereof, and a compound of the formula:



wherein R⁵ is a carboxyl group or a sulfonic acid group, a salt thereof or a reactive derivative thereof, and other symbols are as defined above, or a salt thereof.

27. (Currently Amended) A method for producing a compound of the formula:



wherein

R¹ is a hydrocarbon group;

R² is a hydrocarbon group having 2 or more carbon

atoms, or R¹ and R² may in combination form,

together with an adjacent nitrogen atom, a 1-piperidinyl, 1-homopiperidinyl, 1-

piperazinyl or 1-homopiperazinyl ring

optionally having a substituent or substituents;

R³ is a hydrocarbon group optionally having a substituent

or substituents or a heterocyclic group optionally

having a substituent or substituents;

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R^4 is a hydrogen atom, a hydrocarbon group optionally having a substituent or substituents or a heterocyclic group optionally having a substituent or substituents;

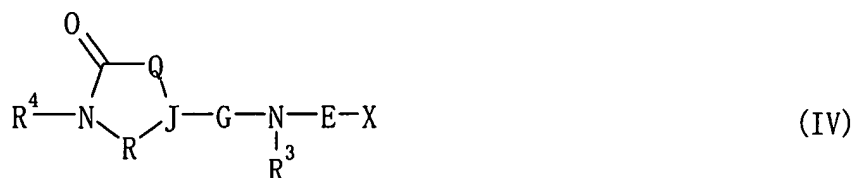
E is a divalent chain hydrocarbon group optionally having a substituent or substituents other than an oxo group;

G is CO or SO₂;

J is a nitrogen atom or a methine group optionally having a substituent or substituents; and

Q and R are each a bond or a divalent chain C₁₋₃ hydrocarbon group optionally having a substituent or substituents,

or a salt thereof, which method comprises reacting, in the presence of a base, a compound of the formula:



wherein X is a leaving group, and other symbols are as defined above, or a salt thereof and a compound of the formula:



wherein each symbol is as defined above, or a salt thereof.

28. (Currently Amended) A method for suppressing ~~a chemokine~~ CCR5 receptor activity, which method comprises administering an effective amount of the compound of claim 1 to a mammal in need thereof.

29. (Currently Amended) A method ~~Use of a compound of claim 1~~ for the production of a pharmaceutical agent that suppresses a chemokine receptor activity comprising combining a compound of claim 1 with a pharmaceutically acceptable carrier, diluent or excipient.

30. (Cancelled)

31. (Currently Amended) The ~~compound~~ method of claim ~~28~~ 30, wherein the ring formed by R¹ and R² optionally having a substituent or substituents is a 1-piperidinyl group or a 1-piperazinyl group each optionally having a substituent or substituents.

32. (Currently Amended) The ~~compound~~ method of claim 31, wherein the substituent of the 1-piperidinyl group or 1-piperazinyl group is (1) phenyl-C₁₋₄ alkyl optionally having halogen on a benzene ring, (2) diphenylmethyl optionally having hydroxy, (3) benzoyl optionally having halogen on a benzene ring, (4) 2-phenylethen-1-yl, (5) phenyl optionally having halogen, (6) hydroxy, (7) phenoxy or (8) benzyloxy.

33. (Currently Amended) The ~~compound~~ method of claim ~~30~~ 31, wherein the ring optionally having a substituent or substituents is a 1-piperidinyl group optionally having a substituent or substituents.

34. (Currently Amended) The ~~compound~~ method of claim 33, wherein the substituent of the 1-piperidinyl group is a benzyl group optionally having halogen on a benzene ring.

35. (Currently Amended) The ~~compound~~ method of claim ~~2~~ 28, wherein R³ is (1) a C₁₋₆ alkyl group, (2) a C₃₋₈ cycloalkyl group, (3) a benzyl group optionally having a hydroxy group, (4) a naphthylmethyl group, (5) a phenyl group optionally having, as a substituent, (a) C₁₋₄ alkyl optionally having halogen, (b) C₁₋₄ alkoxy optionally having halogen, (c) phenyl, (d) cyano, (e) benzyloxy or (f) a halogen atom, (6) a naphthyl group, (7) an indanyl group or (8) a tetrahydronaphthyl group.

36. (Currently Amended) The ~~compound~~ method of claim ~~2~~ 28, wherein R³ is a phenyl group optionally having, as a substituent, C₁₋₄ alkyl or halogen.

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37. (Currently Amended) The ~~compound~~ method of claim ~~2~~ 28, wherein E is C₂₋₆ polymethylene optionally having hydroxy.

38. (Currently Amended) The ~~compound~~ method of claim ~~2~~ 28, wherein R⁴ is (1) a hydrogen atom, (2) C₁₋₆ alkyl optionally having (a) halogen, (b) pyridyl, (c) morpholino, (d) furyl, (e) ethynyl or (f) C₃₋₈ cycloalkyl, (3) phenyl-C₁₋₄ alkyl optionally having (a) halogen, (b) C₁₋₄ alkyl, (c) halogeno-C₁₋₄ alkyl or (d) C₁₋₄ alkoxy on a benzene ring, or (4) C₃₋₈ cycloalkyl.

39. (Currently Amended) The ~~compound~~ method of claim ~~2~~ 28, wherein R⁴ is (a) C₁₋₄ alkyl group optionally having, as a substituent, halogen or furyl or (b) a benzyl group optionally having halogen on a benzene ring.

40. (New) A method for the prophylaxis or treatment of AIDS comprising administering an effective amount of a compound of claim 1 to a mammal in need thereof.

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41. (New) A method for suppressing the progress of the disease state of AIDS comprising administering an effective amount of a compound of claim 1 to a mammal in need thereof.
